

APPLICANT(S): LOUZON, Eliel et al.  
SERIAL NO.: 09/976,285  
FILED: October 15, 2001  
ASSIGNEE: Intel, Corp.  
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### AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently amended) A method comprising:  
managing downloading of at least two firmware functions, which are accessible by more than one driver, with one processor; and  
verifying for said at least one of said drivers if said firmware has been downloaded by another function, wherein verifying comprises checking at least one of a register and a bit accessible by the at least two functions to check if the firmware has been downloaded by another function.
2. (Original) The method according to claim 1 wherein said managing comprises reducing a risk of at least one of said drivers overwriting firmware that has been downloaded and is being used by another of said drivers.
3. (Original) The method according to claim 1 wherein said managing comprises downloading at least two said firmware functions with a single download.
4. (Original) The method according to claim 1 wherein said managing comprises managing downloading of firmware common to at least two of said drivers.
5. (Original) The method according to claim 1 wherein said managing comprises managing downloading of firmware by more than one access operation of the same driver.
6. (Original) The method according to claim 1 and further comprising, for at least one of said drivers, implementing a functionality common to another of said drivers.
7. (Original) The method according to claim 1 and further comprising, for at least one of said drivers, implementing a different functionality than another of said drivers.
8. (Original) The method according to claim 1 and further comprising initializing at least one of said drivers with information to determine a desired firmware sufficient to implement a desired functionality.
9. (Cancelled)
10. (Cancelled)

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11. (Currently amended) The method according to claim [[10]] 1 wherein if said firmware has not been downloaded by another function, then downloading said firmware for said at least one of said drivers.

12. (Previously presented) The method according to claim 11 and further comprising locking access to said firmware by drivers other than said at least one of said drivers.

13. (Original) The method according to claim 12 wherein said locking access comprises memory spin locking.

14. (Original) The method according to claim 12 wherein said locking access comprises PCI (peripheral component interface) bus locking on a memory location of said at least one of said drivers.

15. (Original) The method according to claim 12 wherein said locking access comprises locking a device memory register.

16. (Previously presented) The method according to claim 11 and further comprising setting a register that said downloading said firmware is finished.

17. (Previously presented) The method according to claim 16 and further comprising implementing said firmware.

18. (Previously presented) The method according to claim 12 and further comprising permitting access to said firmware by drivers other than said at least one of said drivers.

19. (Currently amended) Apparatus comprising:

a multi-function device that comprises at least two firmware functions which are accessible by more than one driver; and

a processor adapted to manage downloading of said at least two firmware functions and to reduce a risk of at least one of said drivers overwriting firmware that has been downloaded and is being used by another of said drivers, wherein the processor is to check at least one of a register and a bit accessible by the at least two functions to check if the firmware has been downloaded by another function.

20. (Cancelled)

21. (Original) Apparatus according to claim 19 wherein said processor is adapted to download at least two said firmware functions with a single download.

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22. (Original) Apparatus according to claim 19 wherein said processor is adapted to manage downloading of firmware common to at least two of said drivers.

23. (Original) Apparatus according to claim 19 wherein at least one of said drivers is adapted to implement a functionality common to another of said drivers.

24. (Original) Apparatus according to claim 19 wherein at least one of said drivers is adapted to implement a different functionality than another of said drivers.

25. (Previously presented) Apparatus according to claim 19 wherein at least one of said drivers is initialized with information to determine a firmware sufficient to implement a desired functionality.

26. (Currently amended) A system comprising:

a multi-function device that comprises at least two firmware functions that are accessible by more than one driver;

a processor adapted to manage downloading of said at least two firmware functions and to verify for said at least one of said drivers if said firmware has been downloaded by another function, wherein verifying comprises checking at least one of a register and a bit accessible by the at least two functions to check if the firmware has been downloaded by another function;  
and

a memory in communication with said processor.

27. (Original) The system according to claim 26 wherein said processor is adapted to reduce a risk of at least one of said drivers overwriting firmware that has been downloaded and is being used by another of said drivers.

28. (Original) The system according to claim 26 wherein said processor is adapted to download at least two said firmware functions with a single download.

29. (Currently amended) A method comprising:

managing downloading of at least two firmware functions, which are accessible by more than one driver, with one processor;

and reducing a risk of at least one of said drivers overwriting firmware that has been downloaded and is being used by another of said drivers, wherein reducing a risk comprises checking at least one of a register and a bit accessible by the at least two functions to check if the firmware has been downloaded by another function.

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30. (Previously presented) The method of claim 29, comprising verifying for a driver if said firmware has been downloaded by another function.